

WHAT IS CLAIMED IS:

1. A method of cell reselection by a mobile station communicating with a serving cell comprising:
 - receiving from said serving cell an information element having an indicator corresponding to the routing area of each of a set of neighbor cells;
 - comparing a neighbor cell routing area to said serving cell routing area; and
 - executing a reselection decision in response to comparing said neighbor cell routing area to said serving cell routing area.
2. The method of claim 1, wherein executing a reselection decision includes maintaining connection to said serving cell if said neighbor cell routing area is different from said serving cell routing area.
3. The method of claim 1, further comprising:
 - determining that said mobile station is operating in a packet data transfer mode.
4. The method of claim 1, further comprising:
 - determining that said mobile is operating in a push-to-talk mode.
5. The method of claim 1, further comprising:
 - determining whether a radio link budget criteria is acceptable for said serving cell.

6. The method of claim 1, wherein said information element is transmitted to said mobile station from said serving cell as one of an SI2, SI2bis, SI5, and SI5bis message.

7. The method of claim 1, wherein said information element comprises at least two octets of true/false indicators and wherein a true indication corresponds to a neighbor cell having a routing area identical to the routing area of said serving cell.

8. A method of cell reselection by a mobile station communicating with a serving cell comprising:

receiving from said serving cell an information element having an indicator corresponding to the routing area of each of a set of neighbor cells;

estimating a reselection time delay for said neighbor cell;

comparing said reselection time delay to a threshold value; and

executing a reselection decision in response to comparing said reselection time delay to said threshold value.

9. The method of claim 8, wherein executing a reselection decision includes maintaining connection to said serving cell if said reselection time delay for said neighbor cell is above the threshold value.

10. The method of claim 8, further comprising:

determining that said mobile station is operating in a packet data transfer mode.

11. The method of claim 8, further comprising:

determining that said mobile is operating in a push-to-talk mode.

12. The method of claim 8, further comprising:

determining whether a radio link budget criteria is acceptable for said serving cell.

13. The method of claim 8, wherein said information element is transmitted to said mobile station from said serving cell as one of an SI2, SI2bis, SI5, and SI5bis message.

14. The method of claim 8, wherein said information element comprises at least two octets of true/false indicators and wherein a true indication corresponds to a neighbor cell having a routing area wherein a time delay may be estimated with respect to the routing area of said serving cell.

15. A method of cell reselection by a mobile station communicating with a serving cell comprising:

receiving from said serving cell, a radio link budget criteria for packet transfer mode operation;

determining whether said radio link budget criteria is acceptable for said serving cell; and

executing a reselection decision in response to determining whether said radio link budget criteria is acceptable for said serving cell.

16. The method of claim 15, wherein executing a reselection decision includes maintaining connection to said serving cell if said criteria is acceptable.

17. The method of claim 15, further comprising:

determining whether said mobile station is operating in a packet transfer mode.

18. The method of claim 15, further comprising:

determining whether said mobile station is operating in a push to talk-mode.

19. A communications system comprising:

at least one base transceiver station configurable to transmit an information

element for indication of whether neighbor list base transceiver stations are associated
with a routing area; and

at least one mobile station configurable to receive said information element and to
avoid cell reselection based upon said information element.

20. The communication system of claim 19, wherein said information element
provides indicators that neighbor list base transceiver stations are located within the same
routing area as said at least one base station transceiver.

21. The communication system of claim 19, wherein said information element
is transmitted as one of a SI2, SI2bis, SI5 and SI5bis message.

22. The communication system of claim 19, wherein said information element
comprises at least two octets of true/false indicators and wherein a true indication
corresponds to a neighbor list base transceiver station having a routing area identical to
said base transceiver station.

23. The communication system of claim 19, wherein said true/false indicators
are single bit indicators.

24. A communication system comprising:

at least one base transceiver station configurable to transmit a mode specific radio link budget parameter; and

at least one mobile station configurable to receive said mode specific radio link budget parameter and to determine whether to perform cell reselection based upon said mode specific radio link budget parameter.

25. The communication system of claim 24, wherein said mode specific radio link budget parameter is a packet data transfer mode radio link budget parameter.

26. A method of selecting reselection criteria by a mobile station communicating with a serving cell comprising:

determining whether a terminal mode of the mobile station is one of a packet data mode and a push-to-talk mode;

executing a first reselection process in response to determining that the mobile station is in the packet data mode; and

executing a second reselection process in response to determining that the mobile station is in the push-to-talk mode.

27. The method of claim 26, wherein executing a first reselection process includes determining whether a routing area of a neighbor cell is associated with a routing area of the serving cell.

28. The method of claim 27, wherein executing a first reselection process further includes maintaining connection to the serving cell if the routing area of the neighbor cell is dissimilar from the routing area of the serving cell.

29. The method of claim 26, wherein executing a first reselection process includes estimating a reselection time delay for a neighbor cell and determining whether the time delay is above a threshold value.

30. The method of claim 29, wherein executing a first reselection process further includes maintaining connection to the serving cell if the reselection time delay for the neighbor cell is above the threshold value.

31. A method of selecting reselection criteria by a mobile station communicating with a serving cell comprising:

determining whether a terminal mode of the mobile station is one of a packet data mode and a push-to-talk mode;

executing a first reselection process in response to determining that the mobile station is in the packet data mode; and

executing a second reselection process in response to determining that the mobile station is in the push-to-talk mode.

32. The method of claim 31, wherein executing a second reselection process includes determining whether a routing area of a neighbor cell is associated with a routing area of the serving cell.

33. The method of claim 32, wherein executing a second reselection process further includes maintaining connection to the serving cell if the routing area of the neighbor cell is dissimilar from the routing area of the serving cell.

34. The method of claim 31, wherein executing a second reselection process includes estimating a reselection time delay for a neighbor cell and determining whether the time delay is above a threshold value.

35. The method of claim 34, wherein executing a second reselection process further includes maintaining connection to the serving cell if the reselection time delay for the neighbor cell is above the threshold value.